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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,638	01/18/2001	Masahiro Fukuda	44319-057	6108

7590 03/28/2003

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT PAPER NUMBER

2851

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,638

Applicant(s)

FUKUDA ET AL.

Examiner

Rodney E Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 10 recites the limitation "second correctors" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Drawings

2. Figure 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Horikawa (US 4,930,896).

Regarding claims 1, 8, 12 and 18, Horikawa discloses a "shape measuring apparatus comprising: at least two photo-sensors (Fig. 11, ref.# 104, 105) for converting received light to electrical light reception signals, one photo-sensor having a photo-sensing characteristic identical to another photo-sensor; a first beam splitter (Fig. 11, ref.# 101) which splits a light beam in a predetermined light amount ratio, and introduces split light beams to the photo-sensors,

Art Unit: 2851

respectively; an optical system (Fig. 11, ref.# 84-95) which introduces a light beam reflected from an object to be measured to the beam splitter, and has a focal point (Fig. 11, located at ref.# 96) movable in relative to the object; a driver (Fig. 11, ref.# 115) which drives the optical system to move the focal point; a signal processing section (Fig. 11, ref.# 117) which executes combination processing to light reception signals outputted from the photo-sensors, the signal processing section including: a first displacement memory (Fig. 11, ref.# 116) which stores a relative displacement between one photo-sensor and another photo-sensor in an incident direction; a signal memory which stores light reception signals outputted from each of the photo-sensors; a first corrector (Fig. 11, ref.# 117) which corrects errors of light reception signals from one photo-sensor with respect to light reception signals from another photo-sensor in the incident direction based on the relative displacement stored in the first displacement memory; and a signal processor (Fig. 11, ref.# 117) which combines light reception signals from one photo-sensor with light reception signals from another photo-sensor by replacing light reception signals from a saturated part of one photo-sensor with light reception signals from a corresponding part of another photo-sensor.”

Regarding claims 2, 8 and 13, Horikawa discloses “wherein the signal processing section further comprises: a second displacement memory (Fig. 11, ref.# 116) which stores a relative displacement between one photo-sensor and another photo-sensor in a direction perpendicular to the incident direction; and a second corrector (Fig. 11, ref.117) which corrects light reception signal errors resulting from the relative displacement in the direction perpendicular to the incident direction based on the relative displacement stored in the second displacement memory.”

Regarding claims 3, 6, and 9, Horikawa discloses “wherein each photo-sensor (Fig. 11, ref.# 104, 105) includes a number of pixels arranged in the direction perpendicular to the incident direction.”

Regarding claims 4, 10, 14, 16 and 19, Horikawa discloses “wherein the first and second correctors (Fig. 11, ref.# 117) execute the correction for each pixel.”

Regarding claims 7, 11, 17 and 21, Horikawa discloses “wherein each photo-sensor (Fig. 11, ref.# 104, 105) includes a number of pixels arranged in the direction perpendicular to the incident direction.”

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Burcher, et al. (US 4,088,408), Svetkoff, et al. (US 6,452,686), Sawatari (US 4,017,188), Morander (US 4,548,504), Lerat (US 4,639,140), Akedo, et al. (US 5,424,834), and Nose, et al. (US 5,033,856) each discloses “shape measuring apparatus comprising: at least two photo-sensors for converting received light to electrical light reception signals,” “a first beam splitter which splits a light beam in a predetermined light amount ratio, and introduces split light beams to the photo-sensors, respectively; an optical system which introduces a light beam reflected from an object to be measured to the beam splitter, and has a focal point movable in relative to the object; a driver which drives the optical system to move the focal point.”

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name of the examiner.

March 21, 2003